

TEXTILE BULLETIN

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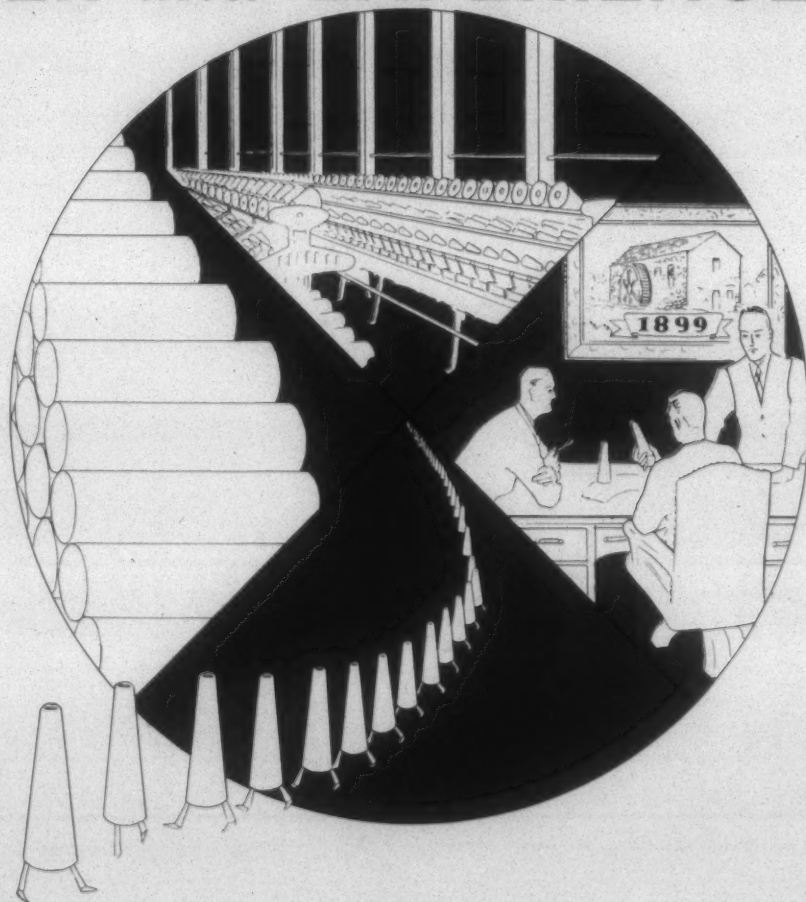
No. 21

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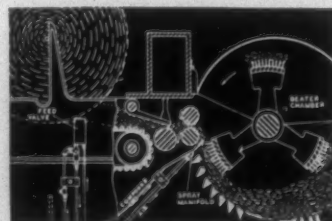
Texaco Texspray gives you a smoother, better-looking product. Each batch of cotton contains a higher percentage of long fibres; fibres are more flexible, easier to draft.

The Texspray System makes healthier working conditions because it greatly reduces fly and dust.

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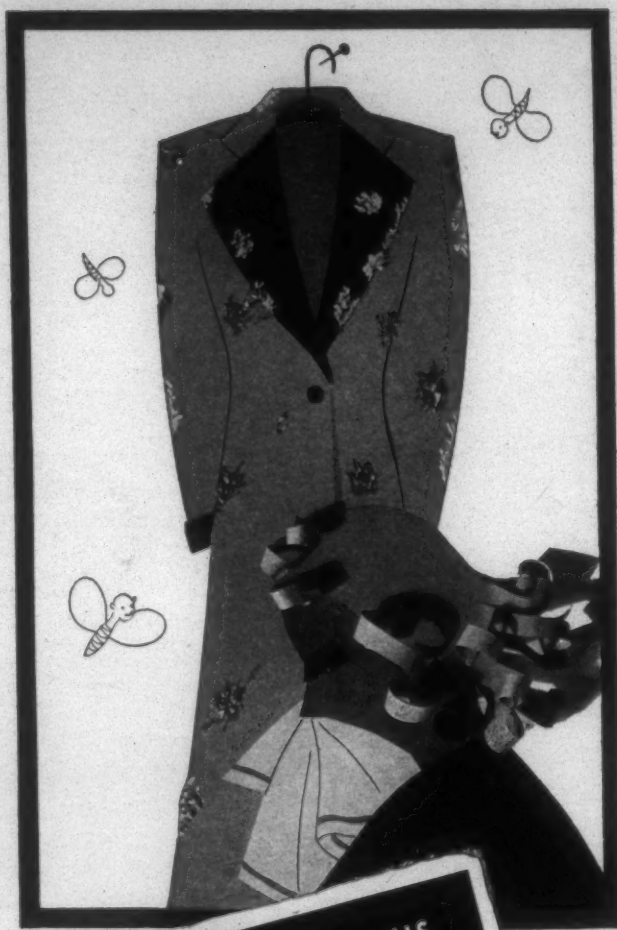
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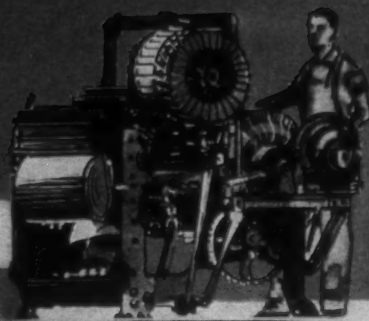
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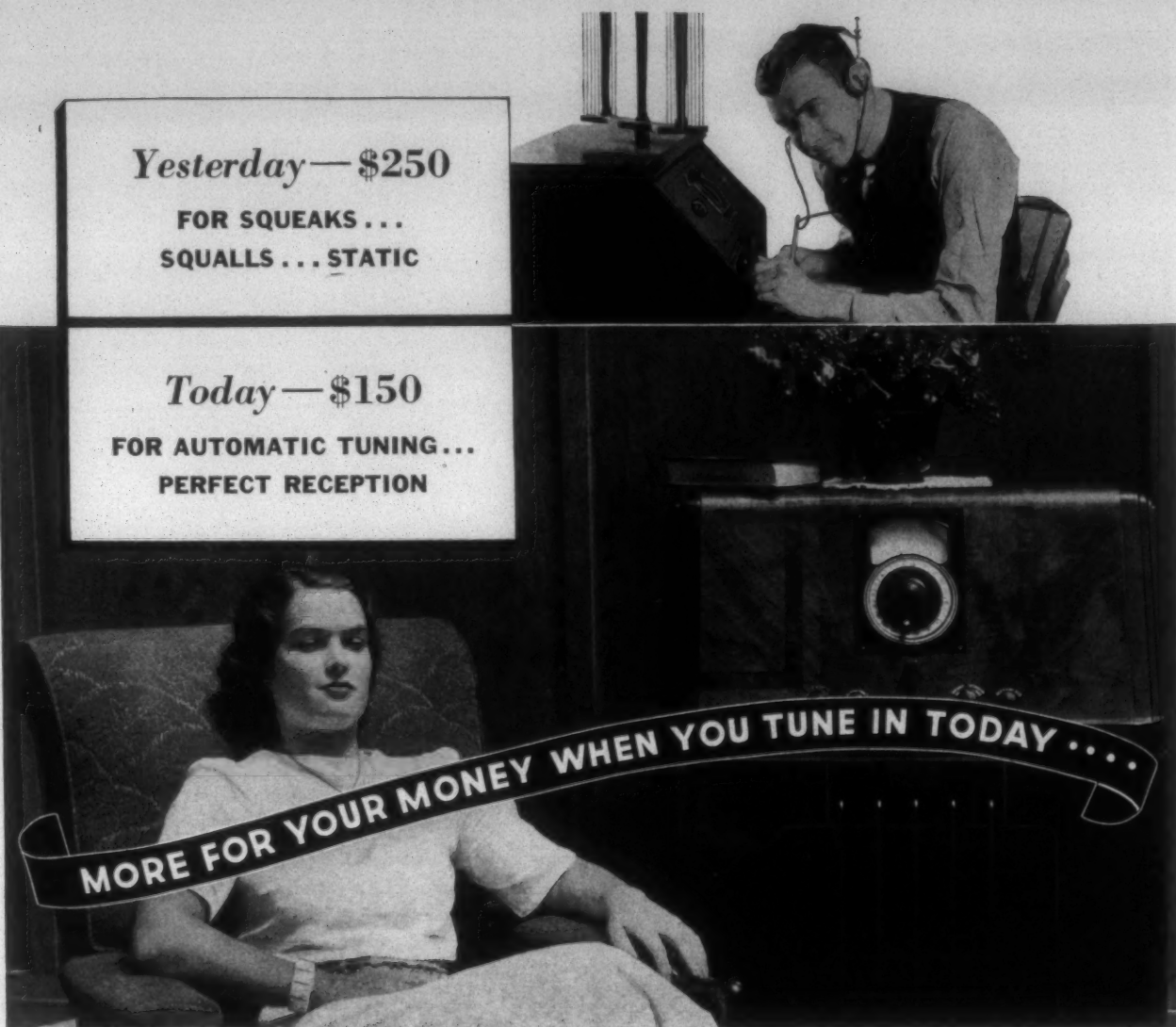
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... and you get more for your money today with the modern roll covering—CORK

WHEN modern science went to work on radio, the quality and efficiency of the product went up and the cost came down. Today, you'll find a set in almost every home. When modern science went to work on roll covering, again quality and efficiency went up and operating costs came down. And today, you'll find more than 6,000,000 active spindles running on the modern roll covering—Armstrong's Seamless Cork Cots.

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The Spinning Test as a Means of Determining Cotton Quality

By Malcolm E. Campbell*

Introduction

TO many people interested in cotton for one reason or another, the factor of quality or utility appears to be one that can be quickly determined and accurately described by the cotton classer, or by the "laboratory worker." If by chance these people understand that there are as yet many limitations to the ability of the classer or scientific investigator to pigeonhole the facts of cotton quality, quickly and accurately, frequently even then the view is held that a spinning test is the real solution.

As they see it, a sample of cotton (ranging in size from a few ounces to fifty bales) is dumped in the first machine of a cotton mill; the wheels turn and a few hours later out comes the finished product. It then remains only to test a few samples of the yarn or cloth, and say where in the orderly and simple category of quality that particular cotton belongs. This is the popular conception of a spinning test. The difficulty is that this view is not infrequently held by persons of some influence in textiles, who for one reason or another wish to know the quality of cottons they find on their hands.

Unfortunately, the matter is not so simple as the popular conception would have it. The results obtained from carefully-conducted spinning tests are of a highly complex nature, and the investigator soon finds himself well into the field of physics and mathematics. Even then, the significance of spinning test results is frequently difficult and sometimes impossible to determine. Unexplainable paradoxes quickly show the newcomer in spinning research work that the spinning test is not a cut-and-dried affair.

The consideration of a somewhat analogous investigation into the quality of a substance other than cotton may throw light on the type of problem which confronts one in a spinning test. For example, standard routine laboratory tests have been established for determining the value of coal as a fuel. The investigator prepares his sample, and by a sequence of routine tests determines the percentages of moisture, volatile combustible matter, and ash. The application of a formula gives the number of B. T.

U.'s per pound of this coal. The higher the number, the greater the efficiency of the coal as a fuel is considered to be. These tests may be compared roughly to laboratory tests on the cotton fibre. The chief difference is that for cotton fibre, "B. T. U.'s" are not available for definitely indicating the value.

Suppose, however, that the coal investigator is not satisfied with his laboratory test of the coal sample, and decides to conduct a "practical" test of the coal. The procedure then is more like the spinning test. A boiler in the power-house is cleaned. Coal is weighed out for the test, a fire built, and the coal shoveled into the furnace in the usual way. Steam pressure is developed in the boiler, and the flywheel of a steam engine begins to turn in the engine room. The investigator takes a series of indicator-cards and calculates the horsepower developed. The period of time for which the sample of coal develops this power is recorded. From these data the work done by the engine is calculated. The ashes are drawn from the fire-box and weighed. To what extent can the investigator consider that he has a true and complete measurement of the quality of the sample of coal?

The illustration given is not exactly parallel to a spinning test since actual samples of the original cotton are transformed into yarn, cord, or cloth and the result is tested, whereas the coal, as such, got no farther than the fire-box of the boiler, the study being made primarily upon the steam pressure that it generated. Nevertheless, the main point in the problem has been brought to the surface. How much does the figure for weight of ashes depend upon the type of grate, the method of firing, and the kind and degree of draft? How much does the figure for work done depend upon these same factors, and innumerable others—friction in steam pipes, speed of engine, atmospheric pressure, setting and timing of intake and exhaust valves? In short, to what extent has it been a test of the efficiency of the boiler and engine and their operation, and to what extent a test of the particular sample of coal? It is not difficult to see that if conditions in this coal test had differed, the results would have differed.

A parallel question thus suggests itself with respect to the spinning test as a means of determining cotton quality: To what extent are the results a measure of manufacturing conditions and machines, and to what extent are

*Senior Cotton Technologist, Bureau of Agricultural Economics, U. S. Department of Agriculture.

they an index of the quality of the cotton tested?

It is the purpose of this paper to discuss the possibilities and limitations of the spinning test as a method of determining the quality or "spinning utility" of cotton, and to show, in part, what has been accomplished and what remains to be done toward making the spinning test a sound and efficient means of measuring cotton quality.

Objects of Spinning Tests

Spinning tests may be divided into two categories, namely, (1) mill tests, and (2) laboratory tests. The purposes for which spinning tests may be conducted are many, and the specific ones depend chiefly upon the mill or laboratory in which the work is done; that is, their interests, equipment, and personnel.

Commercial plants occasionally test a particular cotton to learn whether it is suitable for a specific purpose. The data gained in such tests are for "home consumption" only, and are not ordinarily published. In some cases, however, investigators conduct mill spinning tests with the object of estimating the relative merits and demerits of one or more cottons, and in such cases it is not unusual for the results to be published.

Laboratory spinning tests may be conducted for various purposes. They include evaluating available cotton standards, studying new varieties or strains of cotton, measuring the influence of growth conditions, or harvesting or ginning methods.

They may be employed to evaluate differences in fibre properties measured in the fibre laboratory. The ultimate goal of much of this latter type of research is to establish an equation for predicting the spinning quality of cotton from measurement of the various fibre properties. Just how far it will be possible to go toward the attainment of this end is a point for conjecture at the present time. It is clear, however, that progress can be made only by careful study of the properties of the fibres, and of the materials manufactured from them, and that only by studying fibre and yarn relationships in both average and extreme cases will the part played by the various fibre properties in influencing the spinning utility eventually be determined.

Types of Spinning Tests

Both mill and laboratory tests are useful. The chief differences are in the size of sample employed, the degree of precision obtainable in the conditions of manufacture, and the care usually exercised in supervising the tests. Brief consideration will be given to these two types of spinning tests.

The material employed in a mill test is usually similar to the cotton regularly manufactured in that particular plant. The size of the sample may vary from one to ten or more bales of cotton per lot. The spinning plan used is in most cases the same as that regularly employed in the mill, so the material made in the course of the test may be absorbed later in the regular production. Otherwise, it would be too expensive to spin a large sample for test purposes.

Regular operatives of the mill usually perform the actual labor of handling the cotton, "creeling" the machines and operating them. The work of supervising the tests, making the necessary weighings and measurements, and keeping the records, may be delegated to one person,

or to various individuals in the different departments of the mill. The precision of the tests depends to a considerable extent upon this supervision, which varies a great deal in effectiveness among different mills where spinning tests are conducted.

Testing of the yarns may be done in the laboratory at the mill, if it has one, or at some other laboratory. Conditions vary greatly in mill laboratories. In some instances, provision is made for accurate humidity control, and the testing machines are kept in good order and are carefully calibrated at frequent intervals. Precision balances are to be found in the best laboratories. At the other extreme are dirty, ill-kept rooms, sometimes referred to as testing laboratories, in which may be found an old-style hand-operated skein tester, a crude inaccurate pair of yarn scales, and humidifiers that are generally out of order. Or perhaps there are no humidifiers.

The shortcomings of work done under such circumstances are not hard to guess. Nothing must interrupt the regular production of the mill; so the test is conducted under such conditions and at such times as the circumstances permit. The test is thus placed at a disadvantage from the start, with the result that there is little time for obtaining accurate settings and proper determination of size of stock. The mill operatives who actually operate the machines are not acquainted with the purpose for which the test is being conducted, and by countless means may vitiate the results, either because they are careless or because they are unaware. While most of the better mills are equipped with humidifiers in the card and spinning rooms, local control of a precision nature is usually out of the question. An important variable is thus injected into the test which may have a considerable influence on the results. The value of the average mill test suffers greatly from lack of careful, constant supervision. Too much dependence is placed on the word of employees who are not trained for this specialized work, and who understand neither the objectives of such tests nor the problems involved.

The circumstances under which the best laboratory spinning tests are conducted are vastly different, and are such as to avoid the shortcomings of a mill test. A trained staff of technical people, who work uninterruptedly on tests of this nature only, handle the material from start to finish, on machines that are used for this purpose alone and that are carefully set and adjusted. When measurements of fibre length and other properties determined in the fibre laboratory are available, the machine settings, twists, and other factors based on them. Precise measurements and observations made at frequent periods during processing enable the supervisor to keep a careful check on the cotton at all times.

As little as two pounds of cotton may be used. At a well-known English spinning laboratory the standard size of sample is $2\frac{1}{2}$ pounds. This laboratory, however, is concerned almost entirely with the appearance and strength of a single count of yarn of very limited use. No attention is given to picker and card waste, for data on such small samples would be quite unreliable. In tests where quantity and quality of waste are important considerations, and where a wide range of counts and twists of both carded and combed yarns may be desirable, at least 40 pounds of lint should be used.

In order to obtain a complete picture of yarn quality, it is necessary to spin a relatively wide range of counts

and twists of yarn. The amount of spinning necessary varies considerably, depending upon the purpose of the particular study. In some cases, where only simple comparative results are desired, the range of yarns spun can be quite limited. In others, it may be necessary to spin 100 or more doffs of yarn from the same cotton to obtain the desired picture.

One of the greatest advantages of a laboratory spinning test over a commercial mill test is the greater degree of control of factors during the whole manufacturing process. Although the machines in the laboratory are usually of commercial design and construction, cut down in length in some cases to suit the needs and space requirements of the laboratory, they are kept much cleaner and in better condition. In view of these facts, it is clear that settings may be made with much greater precision in the laboratory. Special facilities for measuring lengths of stock and for controlling speeds are used on many laboratory machines. Equipment for the accurate control of relative humidity and, in some cases, of temperature are provided.

At the spinning laboratories of the Bureau of Agricultural Economics, the organization and settings to be employed are carefully selected with particular regard to the cotton being tested. Settings, twists, and the like are chosen to bring out the full possibilities of the cotton in so far as this can be done with information available at present. Precise weighings are made of stock and of each type of waste at each machine in which cleaning is a function. These data form the basis for waste studies. Frequent sizings are made at all processes to ensure that the desired weights are being made, and to provide a basis for studying the variability of the size of stock at every process. Photographs of stock and waste are made at many points, providing permanent records for use in studying manufacturing characteristics. Samples of stock and waste are held for studies at the fibre laboratory.

The yarns spun at the Bureau's laboratories are marked for identification, and later tested under controlled atmospheric conditions for size, skein strength, single strand strength, and moisture regain. In many cases, other tests of special nature are conducted. Samples of a standard construction of tire cord are also made from each cotton in most instances, and laboratory tests are made upon them.

Considerable attention is being given to the appearance of the yarns spun from each cotton tested. Samples are wound on special boards, forming a semi-permanent record that can be studied carefully when the report of the test is being prepared.

A recent development has been the design and construction of a slasher for the preparation of very small warps, and the adaptation of a special narrow loom for weaving a few ounces of yarn into cloth. The samples of fabric made by this means are later subjected to a variety of tests. Consideration is now being given to the use of bleaching, dyeing, and finishing units which will permit the handling and treatment of very small samples of cloth.

Members of the spinning staff are trained to watch the behavior of the test cotton at each process and to make note of any unusual features observed. At the same time, an attempt is made to determine, if possible, the causes of faulty or unusual behavior, with a view to throwing

light on the quality of the sample being subjected to the spinning test.

A record is kept of the rate of end breakage at the spinning frame during the spinning of each count and twist of yarn, providing a measure of importance in the consideration of relative spinning quality of cotton.

Spinning Test Criteria

The measures of quality sought in connection with the spinning or manufacturing test are varied, and depend largely upon the specific purpose of the test and the conditions under which the work is done.

In some spinning laboratories, emphasis is placed on comparative rather than on absolute measures of quality. Such laboratories employ control samples with each test, and a new cotton is thus found to be better than, equal to, or inferior to the control sample. Thus, within certain limits a sample can be compared by inference with others previously spun and compared with samples of the same control cotton. Work of this kind is being conducted at two well-known English spinning laboratories.

For other purposes, however, it is more desirable to place the results on an absolute basis, since one of the chief objectives is to obtain a clearer understanding of the relationships of the properties of the fibres with those of the products manufactured from them. At the same time, it is desirable to know where a particular cotton stands in the scale of quality, and to provide stable bases for comparison. Use is now being made by the Bureau of an accumulation of data regarding waste and yarn strength developed in connection with the work of this project over a period of about eight or nine years. A series of charts show the average percentage of each type of waste removed from each grade of cotton during the manufacture of carded yarn. A nomograph gives the strength that may be expected, on an average, from any count of warp yarn that may be spun from any staple length of cotton, covering a considerable range of both yarn count and staple length. With the use of these nomographs it is possible to make a quick comparison of the results of a test of a single cotton, and thus to determine whether it is of inferior, average, or superior spinning quality.

The factor of yarn strength is undoubtedly the most widely-used criterion of quality obtained from the spinning test. Probably more attention has been given to the development of methods for obtaining yarn strength than to any other measure; consequently it is now a relatively well-accepted test. Most American and English mills and laboratories employ the skein test, although some use is also made of single-strand strength measurements. In continental Europe, on the other hand, the single-strand test seems to be in greatest favor.

The so-called "ballistic" tester is found in many English laboratories, but few if any are used at the present time in this country. With the use of this device it is possible to measure the "work of rupture" expended in snapping a specimen of yarn, cord, or cloth.

An instrument has recently been placed on the market in this country for use in determining the elasticity and permanent elongation for given loads, the tensile strength of the specimen, and the effects of repeated stress or "fatigue" upon these factors.

(Continued on Page 30)

Southern Writer Reveals Industrial Conditions in North

By Harry Ashmore

Author's Note: This is the first of a series of six articles by a Southern newspaper man who wondered about the many attacks made upon the industrial South by Northern newspapers and magazines and went into the Deep North to see how they managed to cast the first stone. The author does not present the facts in these articles as typical of the entire section; they are designed to show that low wages, long hours, and primitive working conditions can be found anywhere, and to prove the obvious fallacies of the Southern "surveys."

Philadelphia, Pa., July 13.—The Friendly City isn't so friendly any more.

You can sense industrial unrest as you walk about the streets and you can feel fear that amounts almost to phobia in some quarters. Philadelphia's manufacturers aren't happy these days.

Many troubles beset them, troubles that go deeper than any recession or depression, troubles of a permanent nature. And, as is always the case, those troubles have been passed along to Philadelphia's workers.

Smokeless Chimneys

You can take an elevated train out to Kensington and Frankford and gaze out of the windows at the rows of dingy, indential houses and the tall stacks, smokeless for the most part these days, that mark one of the greatest industrial areas in the nation.

There are hundreds of mills out there where hosiery, fine goods, narrow fabrics, dyestuffs, tapestries, and various other products are manufactured. There too are the homes of hundreds of thousands of workers.

Down on the sidewalk in the shadow of the El you begin to get an idea of what goes on beneath those roofs. You find workers congregating in little knots on front doorsteps and in the bars that mark every corner. They aren't happy, either.

They share the universal fear that the industry upon which they depend is moving out from under them. The trucks that back up to an occasional mill and haul away the machinery and the vacant plants that dot the area don't discourage that fear a great deal.

A Worker Talks

Joe McGuire feels it as he sits on the doorstep of his house and leans back in the sun and gazes at the vacant hosiery mill across the street where he once worked and made good money.

In all his 27 years, Joe has never been out of the city limits of Philadelphia. He's not sure now that there's any reason to go. "Things are just about as bad everywhere else, I guess," he says.

He went into the mill when he was fifteen years old and he worked there seven years. In that time he learned a lot and he made as much as \$50 a week. He joined

a union and he worked hard and he was getting along until one day they told him not to come back to work. The next day the mill was closed. Somebody told Joe it had moved South.

He worked around in some other mills off and on, but the depression had set in in earnest and there wasn't much doing. Finally he ended up on a WPA project and he's still on one. He's building a school house now and he makes about \$20 a week.

"I can just barely live on that. Even a single man can't get by on much less than \$100 a month in this town," Joe explains. He never got married but he figures he may have to any day now and he's got a girl all picked out. If his WPA project runs out, which WPA projects have a bad habit of doing, Joe will have to go on relief. Married men on relief get almost twice as much as single men, and Joe's no fool.

No Bitterness Here

You would think Joe would be bitter about the South. He's seen the mills where he worked move, and he knows they were heading into Dixie.

But Joe isn't bitter. In the years he has sat on those front steps he has become something of a philosopher. "You can't blame them mills for moving. It got so they couldn't make no money up here and they had to do something."

Joe's a union man and he's still an ardent one, but he lays some of the blame for his condition on the unions. Both the CIO and the AFL are strong in Philadelphia and the city's almost completely unionized.

"Some of them boys in the union are too hard-headed. They give the manufacturers hell, they won't take no paycuts when things get slack, and when things do get to running good they strike for more money. The owners ain't standing for it, that's all," Joe tells anybody who will listen.

"Don't get me wrong. We got to have unions. If we didn't the manufacturers would starve us to death just like they did before we got 'em. But the unions have got to quit being so stubborn and they got to listen to reason a little more. If they don't this is going to be a ghost town before long."

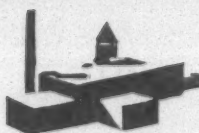
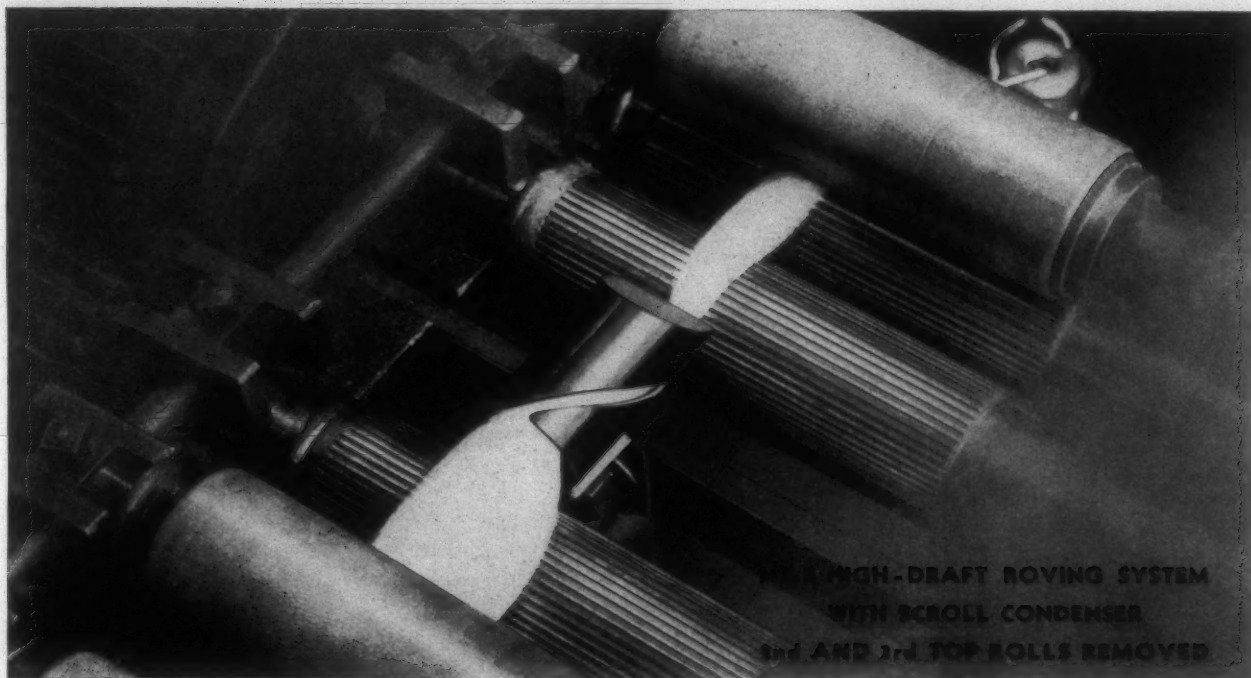
It costs Joe and his fellow-workers plenty just to live in Philadelphia, and like most of the others he doesn't feel that he's getting his money's worth. "Rents keep going up and food costs like the devil, too. Plenty of these people are catching hell now that these plants out here ain't running but two or three days a week."

30 Bucks a Month

He points out the house in which he lives with his

(Continued on Page 16)

HOW TO MODERNIZE YOUR
CARD ROOM AT **SMALL**
COST AND REALIZE UP TO
90% ON YOUR INVESTMENT



Because the H & B High-Draft Roving System can be (and has been) successfully applied to practically every type and make of existing roving frame, it offers an opportunity to modernize your card room at relatively small cost (perhaps \$7,000 to \$10,000).

Furthermore this outlay is quickly paid for by the large savings effected, the return per annum on the investment sometimes amounting to as much as 90%.

The H & B High-Draft Roving System is usually applied to intermediate and roving frames. It is designed to take a sliver from the drawing frame and draft up to 35, producing up to 6.00 hank roving in one operation, for regular or long draft spinning. The number of rollers (4 or 5) is determined by the drafting requirements.

It is now successfully operating in over 50 mills.

Let an H & B Technical Survey determine what this system will do for YOU. One of our engineers will call on request without obligating you in any way.

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Personal News

W. V. Gilmore is now superintendent of S. Slater & Sons, Inc., Slater, S. C.

J. E. Waldrop has been promoted to the position of overseer of weaving, Dunnean Mills, Greenville, S. C.

R. C. Young, of Charlotte, has recovered from an appendectomy and is again on duty for Borne, Scrymser Company.

L. C. Atkisson, president of the Textile Specialty Co., Inc., has been elected president of the Rotary Club of Greensboro, N. C.

Edwin M. Holt, manager of the Erwin Cotton Mills, Cooleemee, N. C., has resigned as president of the North Carolina State Baseball League, a Class D league.

Ralph Alexander is now assistant treasurer of S. Slater & Sons, Inc., Slater, S. C.

Elliott Springs, president of the Springs Cotton Mills, Lancaster, S. C., has been elected a member of the board of directors of the Standard Bonded Warehouse Company, Charlotte, N. C.

Harry A. Haynes, formerly connected with Turner Manufacturing Company, is now sales manager for On-Duty Clothes, Division of Highland Crafts, Inc., Biltmore, N. C.

Hugh Patrick has resigned from the position of general superintendent of Union Bleachery, Greenville, S. C. According to reports, no successor will be named, and his duties will be taken over by H. R. Mathewson, superintendent, and E. S. Tillinghast, assistant superintendent.

CLINTON STARCHES

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CLINTON, IOWA

QUALITY

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HOUGHTON STANDARD TOPS

Suitable for Rayon and Cotton Blends

HOUGHTON WOOL COMPANY

235 Summer St.

Boston

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JAMES E. TAYLOR, Phone 3-3692, Charlotte, N. C.

J. L. Rhinehardt, formerly overseer of spinning at Pickett Cotton Mills, High Point, N. C., is now overseer of spinning, spooling and warping at the Osage Mill, Bessemer City, N. C.

B. W. Bingham, formerly overseer of carding at Pickett Cotton Mills, High Point, N. C., is now superintendent of Virginia Mills, Inc., Swepsonville, N. C.

James A. Lybrand, Jr., formerly assistant treasurer of S. Slater & Sons, Inc., Slater, S. C., manufacturers of rayon dress goods and linings, is now connected with Carter Fabrics Corporation, Greensboro, N. C.

Students From Foreign Countries At N. C. State College

Shin Y. Daun and his cousin, Kwoh Chang Li, both of Shanghai, China, are enrolled at N. C. State College, Raleigh, for the summer session. Both boys are textile graduates from a Chinese University. They studied at Lowell Textile School, Lowell, Mass., last summer.

Jose T. Madero, of Parras, Coah, Mexico, is a sophomore in the Textile School, and is a student in the regular term.

SILK and RAYON

Bobbins

Reels

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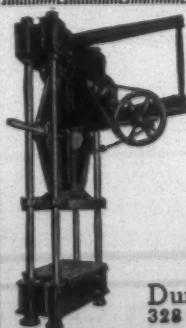
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BALING PRESS

Motor Drive, Silent Chain, Center of Screw.

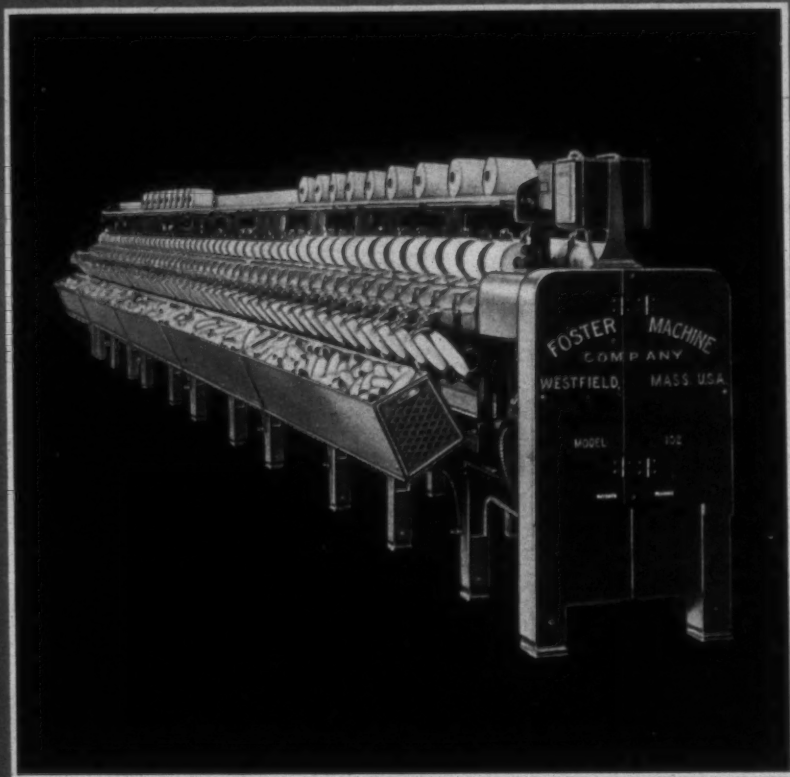
Push Button Control—Reversing Switch with limit stops up and down.

Self contained. Set anywhere you can run a wire.

Our Catalogue sent on request will tell you more about them.

Dunning & Boschert Press Co., Inc.
328 West Water St. SYRACUSE, N. Y.

TWICE THE PRODUCTION WITH 1/3 LESS LABOR



This increased efficiency of the Foster Model 102 winder as compared with older type machines is effected with a corresponding improvement in quality of product. Cones are more uniform in density due to improved pressure and tension devices and degree of density can be accurately and easily regulated to suit the particular requirements. The angle of wind can also be quickly and economically changed to meet individual conditions.

This modern winder is already simplifying the competitive problem for many cotton yarn mills. Let it do the same for you.

Descriptive circular on request.

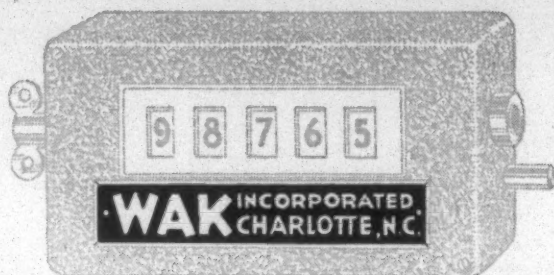
FOSTER MACHINE COMPANY
Westfield, Mass.

FOSTER MODEL 102

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Rugged - Dependable

Pick Counters
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efficiency at
High Speed
and low
operating
cost
Modernize
with the New
**Merrow Class A
Machines**

Write for details and let us demonstrate these machines on your own fabrics.

THE MERROW MACHINE COMPANY
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S. W. Hollister, P. O. Box 721 R. B. Moreland, P. O. Box 895
Spartanburg, S. C. Atlanta, Ga.

Southern Writer Reveals Industrial Conditions in North

(Continued from Page 12)

family. It consists of five rooms sandwiched into a block of houses that look just alike. It is red brick, dark with the grime that has gathered through the years. Clothes flap from a line on the roof because there is no lot, it is flush with the sidewalk and its walls touch those of the houses on either side. There is no porch, only three stone steps leading down to the sidewalk. There isn't a blade of grass or a tree within half a mile.

"We pay 30 bucks a month for that. Imagine that, 30 bucks for that dump. Lots of them cost as much as 40 or 50 bucks and they ain't no better," Joe says.

Joe's got over his bitterness, but a lot of his fellows haven't. They're fighting mad and baffled and resentful. They don't see it the way Joe does, they have no sympathy for the owners who are pulling up stakes and moving out.

Herman is one of these. He fumes as he walks up and down in front of a manufacturing plant with the big sign bearing the legend "Locked Out" in flaring red letters.

"What the hell are them guys trying to do to us?" he wants to know as he points up to the front of the building where a sign conspicuously announces that the building is for rent.

Herman Walks

Herman has been walking up and down in front of that building for weeks. He doesn't know whether he's doing any good or not. All he knows is that one day the company called in union officials and told them that business was bad and that all the workers would have to take a 20 per cent pay cut.

The pay had been pretty good before that and the plant had been running full time, so the union voted "no" unanimously. The next thing anybody knew the firm shut up all its Philadelphia plants, stuck up "For Sale" signs on the building and started moving the machinery out.

"We wasn't going to let 'em get that stuff out of the plant but they come down about 6 o'clock one morning with a couple of hundred cops and started moving. There wasn't anything we would do," Herman says.

"We don't know where they're going, but I guess they'll go South like the rest of them. But it ain't gonna do 'em no good because we'll go right with 'em. We got to go; there's 12,000 of us turned out of this plant with nothing to do."

A Familiar Job

Herman is used to picketing. He got a lot of experience last year when he and the others struck and stayed out six weeks and finally wrangled a 5 per cent increase out of the company. "Geez, we lose six weeks' pay and then get a lousy 5 per cent increase. Then before we know it they turn around and want to cut us 20 per cent." Herman worked 36 hours a week at 60 cents an hour before the lockout.

Herman still thinks the union was right, even though it looks like the plant is serious about moving out of Philadelphia. "We shouldn't of taken that pay cut. We can't let them guys push us around like that," he says, and

(Continued on Page 24)

*"So, I said
to the Boss—"*



"I said, 'Mr. Wilkins, tomorrow is my thirty-fifth birthday. Do you realize that some of our looms are older than I am?'

"Well, at first he didn't seem to think that thirty-five years was so old. But, when I told him that in my lifetime I had seen the development of the telephone, the automobile, the radio and so on, he began to realize how much technical progress has been made since those looms were bought.

"I went on to tell him of all the loom improvements I saw at the last textile show—the higher speeds, the flexibility, better cloth, etc. Finally he stopped me and thought he had put an end to my argument by saying, 'I know, Austin, the things you say are true. But looms cost money.

To completely re-equip our plant right now is entirely out of the question.'

"That was final until I told him about C & K's modernization plan—you know, about replacing the worst 10% first because that will give the greatest benefit? Well, that kind of made sense to him.

"Anyway, when it wound up he had put up to me the responsibility of finding out which of our looms to replace first."

Dear Mr. Austin:

Congratulations on your new job. If we can help you in ferreting out the worst 10% of your looms, please let us know.

Very truly yours,
CROMPTON & KNOWLES LOOM WORKS



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ALLENTOWN, PA. PHILADELPHIA, PA. CHARLOTTE, N. C. WORCESTER CROMPTON & KNOWLES JACQUARD & SUPPLY CO., PAWTUCKET, R. I.

TEXTILE BULLETIN

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Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

A North Carolina Governor

During the recent strike at the Cone group of mills in Greensboro, N. C., 18 employees called upon Governor Clyde Hoey of North Carolina with the statement that they had signed petitions of 3,249 of the 4,591 regular employees stating that they wished to be assured of protection in returning to their jobs.

"I told them," said the Governor, "that in North Carolina every person has the right to strike or quit work individually or collectively, but that those who wanted to work had a right to do that.

"If the majority want to go to work the State of North Carolina will afford them protection if the local authorities are unable adequately to protect them.

"I told them that applied to the whole State, and that I was not considering the merits of their case. Any majority of the employees of a firm in the State will be protected if it wants to continue work."

Compare that statement with the actions of Governor Earle of Pennsylvania and Mayor Moore of Philadelphia and cease to wonder why knitting mills are moving from Pennsylvania to North Carolina.

Compare it with the reputed statement of Governor Bibb Graves of Alabama to a labor leader, "Didn't we give them hell," as a delegation of Huntsville mill employees and business

men left his office after pleading for such protection as would permit the employees to return to their work and the mills to reopen.

Governor Hoey can not be accused of being antagonistic to labor. He says that as Governor of North Carolina, it is his duty to protect any citizen who wishes to enter his chosen place of employment.

That Economic Report

We do not know who suggested to Franklin D. Roosevelt that he should declare the South to be Economic Problem No. 1 and appoint a commission to "make a report" nor do we know who suggested the appointment of Miss Lucy Mason, of the C. I. O., or President Frank Graham, of the University of North Carolina.

Some light, however, was thrown upon the subject when we noted that Lowell Mellett is director of the National Economic Conference which is to direct the work and, probably, the report of the Southern Economic Conference.

Lowell Mellett was editor of the *Washington News*, a Scripps-Howard newspaper with marked leanings towards communism and a habit of minimizing the radical activities of communists.

On October 19, 1929, in a rank and un-American editorial entitled "Courts, Communists and Common Sense," the *Washington News* said:

The Communist Party is just as legal in this country as the Republican or Democratic. Its strikes are as legal as those of the A. F. of L. The rights of their members in courts are absolute and unqualified.

President Frank Graham was one of the sponsors of the Summer School of Moscow University in 1935 upon the grounds that a study of communism in Russia was a part of "academic freedom."

The next summer, however, he was one of forty educators who opposed permitting American athletes to attend the Olympic Games in Germany upon the grounds that, while there they might come in contact with the Nazis and learn something about that form of Government. President Graham lost his enthusiasm for academic freedom when it meant learning the beliefs of the enemies of communism.

With Lowell Mellett as director of the National Economic Council and Frank Graham as chairman of its subsidiary, the Southern Economic Council, and Miss Lucy Mason, of the Communistic C. I. O. as an assistant, the report can be written without the expense of any investigation.

The report upon the Economic Ills of the South will be written and filed away and the only good that it will ever do anyone will be to those who, in the future, wish to attack the

South and can cite as "Exhibit No. 1" or "Your Own Commission's Report" the document which has been laid away.

The report will be just about as truthful and fair as would be a Japanese report on need for the war in China.

Senator Logan, of Kentucky, although a Roosevelt supporter, said last week:

The South has no economic problems to compare with those in New York, or Ohio, or Detroit, and other industrial areas.

What the South needs most is for the rest of the country to allow it to work out its own problems and not mess around with us too much.

Wage and Hour Administrator

Elmer F. Andrews, Industrial Commissioner for New York State, has been appointed as Administrator of the Wages and Hours' Law which becomes effective October 24th.

Mr. Andrews became Deputy New York State Industrial Commissioner in 1929, and was appointed commissioner four years later when Miss Perkins resigned to become U. S. Secretary of Labor. Mr. Roosevelt named him chairman of the American delegation to the Geneva International Labor Conference in 1934.

Prior to entering State service, Andrews engaged in insurance work, was in charge of warehouse and railroad construction in Cuba, and held engineering posts with several railroads. He served in the Air Corps during the war.

Now 48 years old, Andrews is married and has three children. He is a native of New York City and was educated at Rensselaer Polytechnic Institute.

Hoffman Backs Hague

Former Governor Harold G. Hoffman endorsed the position of Mayor Frank Hague of Jersey City in opposing extremists in political beliefs and declared that

"no organization can come into the State of New Jersey which, in other States, has seized private property, stirred up violence and caused bloodshed and then belly-ache because they can't get the protection of the law they are trying to overthrow.

"One thing that burns me up today is all the weeping and wailing over fellows like O'Connell, Bernard and Thomas—these birds who never did a thing for their fellow men, simply want to tear down. And people worry so much about the kind of raw deal they are receiving in certain communities in the State of New Jersey."

Labor Board Decision Reversed

The U. S. Circuit Court of Appeals, sitting at Richmond, Va., and hearing the case of the

Mooresville Cotton Mills vs. National Labor Relations Board reversed a ruling of the Board when it said:

It would seem to be manifest that the power conferred upon the board to order an offending employer to reinstate employees does not include former workers who have obtained regular and substantially equivalent employment elsewhere.

We assume that this means that former employees who have secured "substantially equivalent employment elsewhere" are no longer employees and that the N. L. R. B. can no longer assist the C. I. O. by allowing such former employees to be hauled back and be paid to cast their votes for the C. I. O.

Had that rule been in effect the C. I. O. would have lost the Lumberton election.

Unfilled Orders

An organization which makes a business of studying and forecasting business trends said last week:

The most favorable change in the statistics and the one most responsible for the price inflation, as far as it has gone, was an increase of almost 100 per cent in unfilled orders.

For the first time since early in 1937, a trend has been started which, under favorable conditions, should transfer some of the burden of inventories from mills to distributors.

Roosevelt's Attitude Towards Business

Speaking recently before the Iron and Steel Institute, Gen. Hugh Johnson is reported to have declared that while he was head of the NRA Franklin D. Roosevelt declared to him:

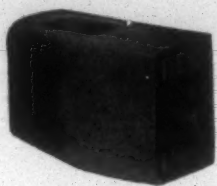
Business has bucked me and when industry wants to play with me again, it will be on its hands and knees.

Southern Freight Rates

Governors of almost all of the northeastern States have appeared before the hearing at Buffalo, N. Y., and opposed granting a reduction in freight rates to the South.

As we understand their position they favor forcing Southern mills to pay exactly the same wages as Northern mills, requiring Southern mills to pay high freight rates when they ship unfinished goods to the North but permitting Northern mills to ship the same goods back to the South, after finishing or conversion, at much lower freight rates.

DENMAN LOOM PARTS



Mean Just One Thing:

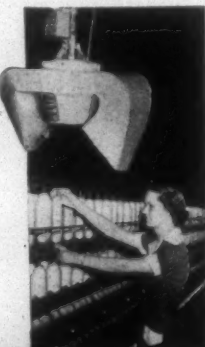
Lowest Cost per Loom per Year

PICKERS, LUG STRAPS,
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PARKS
Traveling Cleaners
improve product
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Mill News Items

The following news items, taken from Southern newspapers during the past few weeks, indicate decided improvement in the Southern textile industry.—Ed.

NEWBERRY—Z. F. Wright, president, announced today the Newberry Cotton Mills were resuming full-time operations this week after six weeks of a three-day-a-week schedule.

LIBERTY, July 8—Following a curtailment of several months, the Easley Cotton Mills, Inc. of Liberty will resume operations Monday morning on their regular two 40-hour shifts, it was learned today from officials.

CLINTON, S. C.—The two cotton mills of Clinton, the Lydia and the Clinton, will resume operations next week on a full-time schedule. The two plants have been idle for the last 12 weeks.

STATESVILLE, N. C.—The Hall-Kale Manufacturing Company, located at Troutman, near here, manufacturers of yarns, has received sufficient orders to enable this plant to operate on a full-time schedule for ten weeks. This company is said to have dismissed a large number of operatives attributed to slack business, however, received this large order which made it necessary to rehire them at once.

SHELBY, N. C.—One hundred and fifty-eight persons have been given employment in the textile plants of the country within the past six months, according to an announcement made by C. A. Spruill, head of the North Carolina employment service's Shelby office, and he states that indications are that the textile activity is beginning to pick up here and throughout the county and he may have other openings soon.

ASHEBORO, N. C.—With optimism prevailing here in textile and other manufacturing circles, a survey reveals that a number of the mills are now operating on much better schedules with a decided pick-up in business within the last two weeks.

The Acme Hosiery Mills, Inc., manufacturers of silk, rayon and cotton hosiery, is operating on a much better schedule.

The Asheboro Hosiery Mills, manufacturers of women's seamless hosiery, are operating on an overtime schedule.

The Stedman Manufacturing Co., handkerchief manufacturers, is operating on a much better schedule.

The McCary Hosiery Mills, Inc., manufacturers of full-fashioned silk hosiery, is operating on a full time schedule, with no indications of a let up in this excellent schedule. This company operates 125 full-fashioned machines.

The Standard Tytape Co., manufacturers of cotton and rayon braids and jacquard lacing is having a good business.

The McLaurine Hosiery Mills, manufacturers of men's banner wrap and misses anklets, announce a decided increase in the company's business.

Mill News Items

GREENVILLE, S. C., July 8—Nearly all textile mills of Greenville County will be operating on full-time schedules next week as the result of improvement in the textile markets, it was learned yesterday.

Notice was given that Woodside Mills here would resume a 40-hour week next week, and it was understood other plants in the section would boost operations. Woodside has been operating on two six-hour shifts for five days a week for the past two weeks, but will be on full-time operations next week.

It was understood that Dunean Mill would resume three shifts in some departments, or full-time capacity, possibly within the next week. Judson also will resume full operations, it was understood.

Only two or three mills in the county were still on a 30-hour basis yesterday. Many of them have already resumed 40-hour weekly operations with two shifts working.

ASHEBORO, N. C.—In a survey of textile and other businesses of Randolph County, it is revealed that within the past two weeks business has improved very materially.

The Leward Cotton Mills at Worthville, manufacturers of drills and narrow sheetings, have resumed operations after being closed down for several weeks.

The Sapona Cotton Mills at Cedar Falls, manufacturers of hosiery yarns resumed operations Monday, July 4, after having been closed down for a good many weeks.

The Commonwealth Hosiery Mills at Randleman, manufacturers of men's and women's combed rayon, mercerized and acetate hose, are operating on a much better schedule.

The Central Falls Manufacturing Co., a unit at Central Falls of the Burlington Mills, Inc., group, manufacturers of rayon piece goods, continues to operate as it has all during the recession.

The Randolph Mills, Inc., of Franklinville, manufacturers of cotton flannels, continues to operate on the same schedule that has been in effect throughout the recession. All of the mills are located in Randolph County, and there is much optimism throughout the county for continued excellent business.

RAMSEUR, N. C.—General contract for construction of a full fashioned hosiery plant for the Ramseur Hosiery Mills, incorporated, has been awarded to C. M. Guest and Sons, of Greensboro, it was learned from Romeo H. Guest, vice president and treasurer of the contracting firm.

The new plant, which is to be completely air conditioned, will be of glass block construction and will be erected at a cost of \$60,000, Mr. Guest said. When the machinery is installed the total investment will amount to about \$300,000. The structure is expected to be ready for the installation of machinery in the early Fall.

About 300 persons will be employed in the plant. It will be on the highway between Ramseur and Siler City and will cover an area of 20,000 square feet. Plans for the building were drawn by H. V. Biverstein, mill architect and engineer, of Charlotte.

THE ASHWORTH CARD CLOTHING SURVEY

SURVEY

State of Mill
 COURT OF ASSESSORS, BRIDGE, INC.

Page 2
 March 19, 1906

CASE NO.	CLASSES	ACRES	PLATS	IMPROVEMENTS	SEALS
White 1906	Bad S.O.	Good	Fair	Good	Good
3567	Good	Good	Good	"	"
3584	"	"	"	"	"
3585	Bad S.O.	"	"	"	"
3586	"	"	"	"	"
3572	Good	"	"	"	"
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The surveys are made by practical card men, who always use a check list so that nothing is overlooked or forgotten. The facts thus obtained, plus Ashworth integrity, assure you of a complete, accurate and conservative report which will enable you to budget your card clothing repairs over a period of time.

And of course Ashworth is a dependable service, since it offers an uninterrupted supply, prompt repairs and ready availability with—



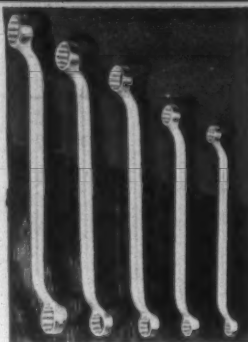
ASHWORTH BROS., INC.

Woolen Division: AMERICAN CARD CLOTHING CO.

FACTORIES in Fall River, Worcester and Philadelphia; SALES OFFICES AND REPAIR SHOPS in Charlotte, Atlanta and Greenville; SOUTHWESTERN REPRESENTATIVE: Textile Supply Company, Dallas, Texas.

PRODUCTS AND SERVICES: Card Clothing for Cotton, Wool, Worsted, Silk and Asbestos Cards and for All Types of Napping Machinery . . Brusher Clothing and Card Clothing for Special Purposes . . Lickerin Wire and Garnet wire . . Sole Distributors for Platt's Metallic Wire . . Lickerins and Top Flats Reclotted at All Plants.

Snap-on-Blue-Point Tools FOR TEXTILE SERVICE WORK



Speed . . . and
Powerful
Leverage

for the
Textile Plant—
All Departments

X-50 Set
Double Offset
Boxockets
Sizes 7/16" to 1"

STANDARD
AND
SPECIAL
WRENCHES
AND
HAND
TOOLS

for

LOOM
SPINNING
TWISTER
SPOOLER
CARD ROOM
FRAME
OPENING AND
PICKER
FIXERS

also

MACHINE
SHOPS AND
GEN. UTILITY



Powerful leverage . . . Speed . . . Safety
. . . Convenience—for All Mill Fixers

These tools embody all the advantages of socket wrenches and end wrenches combined. The completely enclosed head grips the nut on all sides—it cannot slip and damage the machine and prevents danger of skinned knuckles and broken fingers. This wrench gives the same direct leverage as an end wrench . . . plenty of power to break those tough nuts loose or pull them tight . . . double Hexagon broaching allows their use where handle movement is very limited. Make sure the wrench you buy is stamped Snap-on or Blue-Point.

Complete Warehouse Stocks are Carried
at Factory Branches in Textile Districts

WRITE FOR SPECIAL TEXTILE TOOL FOLDER

SNAP-ON TOOLS CORPORATION
KENOSHA — WISCONSIN

OBITUARY

ROBERT BOST KNOX

Newton, N. C.—Robert Bost Knox, 62, prominent textileist, died at his home July 12th after a prolonged illness. Mr. Knox entered the textile business in Newton by starting the Clyde Cotton Mills. This company was later incorporated into Clyde Fabrics, of which he was vice-president and general manager until ill health forced his retirement a year ago. He was also secretary-treasurer of City Cotton Mills of Newton and was identified with other textile interests in the State. Mr. Knox was a member of the Presbyterian Church, the Masonic Order, and was a veteran of the Spanish-American War. He served on the Board of Aldermen of Newton for several terms. He married Miss Clyde Worth of Creston, who survives him, with four sons, Worth Knox of Newton, John Knox of Creston, R. B. Knox, Jr., of Durham, and Joe H. Knox of Newton.

GEORGE F. BRIETZ

Selma, N. C.—George F. Brietz, 71, superintendent of the Selma Cotton Mills for the last 24 years, died at his home July 13th after several months of illness. He was born in Winston-Salem and attended Miss Pfohl's private school and Salem Boys School in Old Salem. He joined the Moravian Church on Palm Sunday, 1881, and held his membership with that church until his death.

His textile career began with services in the Arista Mills at Winston-Salem, where he worked for ten years. During this time he was superintendent of the Hope Moravian Church Sunday School, he organized Calvary Sunday School in Winston-Salem and served as its superintendent for several years. Later, he went to Maryland, where he was connected with the Thistle Mills for six years.

He came to Selma in December, 1914, became superintendent of the Selma Cotton Mills on February 2, 1915. Mr. Brietz had been a member of the local school board for 18 years and a member of the board of stewards of the local Methodist Church for the last 15 years. He was also a charter member of the Selma Kiwanis Club.

He was married to Miss Inez Hatcher, only daughter of the late Dr. and Mrs. O. R. Hatcher, in 1904, who survives, together with a son, Franklin, Jr., a daughter, Mrs. Henry Lamb, of Garland, and a sister, Mrs. Margaret Milburn, of Winston-Salem.

MRS. FLORENCE M. HAMRICK

Gaffney, S. C.—Mrs. Florence Matin Hamrick, 49, wife of Waite C. Hamrick, Sr., head of the Hamrick group of mills, died at her home July 13th after a brief illness. Mr. and Mrs. Hamrick were married 27 years ago. She was born and reared in Chattanooga, Tenn. She was a leader in church activities and charitable endeavors until her health became impaired some time ago. She is survived by her husband; three sons, Waite C. Hamrick, Jr., member of City Council; John M. Hamrick and Charles Hamrick, both of whom are connected in official capacities with the Hamrick group of mills; and a daughter, Miss Florence Hamrick; three sisters, Mrs. Adolph S. Ochs, and Mrs. D. F. Kirkland, of Chattanooga, and Mrs. Joseph O. Dart, Jr., of Dayton, Ohio.

A Definite Step Forward!

IN PERFORMANCE AND DESIGN
OF LONG DRAFT EQUIPMENT

- PARAMOUNT EFFICIENCY
- MAXIMUM SIMPLICITY
- HIGHEST ECONOMY
in maintenance and purchase

The Improved

CASABLANCAS
LONG DRAFTING SYSTEM

IN THEORY—

ACKNOWLEDGED THE BEST

IN PRACTICE—

THE MOST WIDELY ADOPTED

— through 26 years of constant
research and strict specialization

Ask for a Demonstration

AMERICAN CASABLANCAS CORP.

Johnston Bldg.

Charlotte, N. C.

SOLE LICENSEES IN U. S. A.

New "Tufferizing Process" Announced By Howard Bros. Mfg. Co.

After several years of experimental work, Howard Bros. Mfg. Co. announce their new "Tufferizing Process" for the manufacture of card clothing.

According to a statement by the manufacturers, Tufferized Precision Parts have been in an experimental and development stage for three years in Howard Bros. plant. In its perfected form it cut the wire clean and free from burrs. This gives added life and service to Tufferized Card Clothing because it minimizes side and top grinding before delivery. The next improved operation allows uniformly shaped wires with every one absolutely square at the crown and perfect parallel wires. This gives a higher quality Card Clothing, because each pair of wires can seat squarely, evenly and tightly into the foundation both at the top and where the wires pass through the clothing.

Tufferized card clothing will set tighter and lay flatter on cylinders, to insure more even setting of the rolls. These improvements will allow more uniform carding, smooth finish to coarse or fine yarns and longer service at no increased cost.

The new process is perhaps more significant for brushes which are not ground, likewise some Fancies. The Tufferized Precision Parts method of cutting and setting prevents the slightest burr. The new method of setting makes both wires stand up as straight as an arrow. Each pair of wires will set flat and square into the foundation and needle point holes are not enlarged a fraction by burrs on wire passing through the foundation.

W. A. Hunt Represents Mill Devices Co., Inc., and Carter Traveler Co.

W. A. Hunt, for the past two years superintendent of Pickett Cotton Mills, High Point, N. C., has resigned that position to accept a position with Mill Devices Co., Inc., manufacturers of the Boyce Weavers Knotter, and Carter Traveler Co., manufacturers of ring travelers. The manufacturing plants are located in Gastonia, N.C.



W. A. Hunt

Mr. Hunt will be representative for Georgia, Alabama and Tennessee, with headquarters at LaGrange, Ga. He has been active in textile work in the South for a number of years, and has also been active in the Southern Textile Association.

He was a member of the executive committee of the Northern North Carolina-Virginia Division of the S. T. A.

HALEYVILLE, ALA.—The local unit of the Alabama Mills, Inc., after several weeks of idleness, attributed to lack of orders, has resumed partial operations. Approximately 100 looms are now being operated and it is thought by the management that the entire unit will be in operation soon. This unit is engaged in the manufacture of sheetings, warp, sateens and jeans.

WOOL CAN "TAKE IT"



The primary object of spinning is to make GOOD yarn and NOT to see how long a roll covering can be made to last. During the periodical agitations about substitutes for leather and cloth this fact is frequently overlooked.

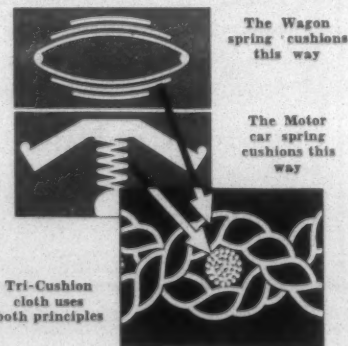
Noone's TRI-CUSHION Roller Cloth (under good leather) makes GOOD yarn as long as the leather remains serviceable. One reason for this is that TRI-CUSHION cloth is made chiefly or entirely of virgin WOOL.

The importance of this fact is best appreciated when it is considered that a large percentage of woollen fabrics for consumer purposes contain REWORKED wool and that wool is the ONLY fibre that is reworked to any extent.

In short, wool can "TAKE IT." Used on drafting rolls, virgin wool retains the necessary cushion throughout its operating life. Hence, when assisted by good leather, it ALWAYS makes good yarn, other operating requirements being normal.

The reason for TRI-CUSHION'S peculiar suitability for drafting in the first place is illustrated in the diagram.

Ask your supplier for this superior roller cloth by name. If he doesn't carry it, write us and give his name.



WILLIAM R. NOONE & COMPANY

105 Washington St., Boston, Mass.

A. ERLAND GOYETTE, Pres.

ARNOLD T. MALONE, Treas.

NOONE'S TRI-CUSHION ROLLER CLOTH

CUSHION IN THE

FIBRE
WARP
FILLING



DRONSFIELD'S PATENT
"ATLAS BRAND"
EMERY FILLETING

"The New Flexible" "Needs No Damping"

Stocks in all the leading Mill Centres



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ATLAS


The Standard Card-Grinding Medium

GUARANTEED "A" QUALITY
 THE ONLY QUALITY WE MAKE

Used the wide world o'er, like
 The DRONSFIELD CARD-GRINDERS



Stocked by the
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 Supply Houses
 and
 Card-Clothing
 Makers



Est. 1904

SIZO-GEL—For Rayon Size
 SIZOL—Softeners and Gums for Cotton
 DESOL—Kier Assistant for Cotton
 PARATOL—For Electrolysis Control in Kier
 HYGROSOL—As Penetrant conditioning Cotton Filling

SEYDEL CHEMICAL COMPANY
 (House of Service)
 JERSEY CITY, N. J.

Greenville, S. C. Edgewood, R. I.
 Harold P. Goller Alexander W. Anderson

SOUTHERN TEXTILE STOCKS
Bought—Sold—Quoted

Since the beginning of our organization in 1919, we have traded actively in Southern Cotton Mill stocks

List your stocks for sale with us

R. S. DICKSON & CO.
 Charlotte

New York Chicago Richmond Raleigh Columbia

Southern Writer Reveals Industrial Conditions in North

(Continued from Page 16)

continues his endless parade up and down the sidewalk.

Philadelphia manufacturers are familiar with that attitude. They remember, with horror, the tragic strike at Apex Hosiery Mill, when thousands of strikers rioted and mobbed the plant, sabotaging over a million dollars' worth of equipment. They can bring similar instances to mind without much difficulty.

Labor troubles, coupled with their long and so far fruitless battle against high city taxes, has put their backs firmly against the wall. Many of them have given up the ghost and moved out of the city entirely. And of those who have remained there are few who have not surveyed the possibilities of establishing their plants in calmer surroundings.

Frightened City

When you add all that up you arrive at the obvious reason behind the bitter attacks on the industrial South that have been smeared across the pages of Philadelphia newspapers.

For Philadelphia is scared. It has grown to be the third city of the United States and a large percentage of the country's manufacturing contests there. The sprawling city depends upon that manufacturing for labor for its millions.

Right now business is off there as it is everywhere else in the country. The manufacturing plants can't sell their goods and curtailment is inevitable. But Philadelphia's workers refuse to accept lower wages, and indeed, the cost of living, which has remained paradoxically at prosperity levels, is such that few of them can afford to take a pay cut.

But it's the last straw to many of the manufacturers. The handwriting is on the wall in Philadelphia, and it's written in large, distinct letters. So the city has turned to the only means it can find to combat migration, painting the South a lurid black in an effort to arouse public opinion against the competition it offers.

Notes Sharp Drop in Cotton Acreage

Washington.—The Department of Agriculture reported that cotton in cultivation on July 1st totaled 26,904,000 acres, compared with 34,471,000 acres a year ago and a 1938 farm program allotment of 27,527,569 acres.

Decreases in acreage from last year were reported in all States, with the greatest reductions west of the Mississippi river.

The acreage was the smallest since the department began keeping records in 1909. It was 78 per cent of last year's total and approximately 70 per cent of the 1937-1936 average of 37,380,000 acres.

The department did not estimate production, but on the basis of past average production, this year's acreage would produce approximately 11,750,000 bales.

Mill News Items

VALDESE, N. C.—Pilot Full-Fashioned Hosiery Mills have purchased several single unit knitting machines from Germany, for installation within the next few months.

FRANKLINVILLE, N. C.—New machinery is being installed in the Randolph Mills, Inc., No. 1 unit. These mills are engaged in the manufacture of cotton flannels.

COOKEVILLE, TENN.—A charter has been granted the Cookeville Shirt Company. This was formerly the local unit of the Washington Manufacturing Company and the new company was organized by a group of local business men to take over the building and equipment formerly operated by the Washington Manufacturing Company.

HIGH POINT, N. C.—Directors of the Adams-Millis Corporation, hosiery manufacturers, have declared a dividend of 25 cents a share on the common stock, the same as three months ago when the payment was cut from 50 cents. The latest disbursement is payable August 1st to shareholders of record July 22nd.

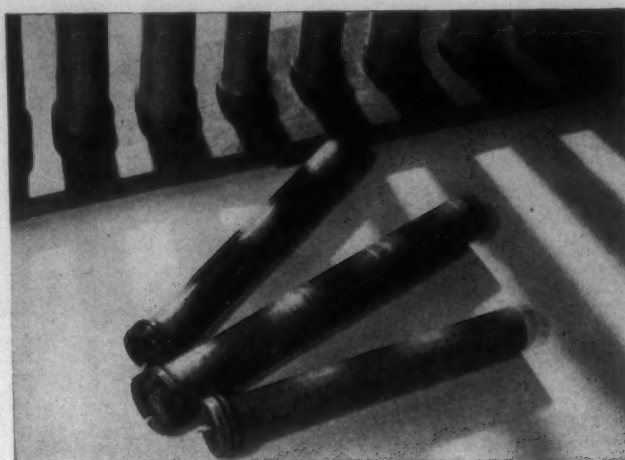
WHITMIRE, S. C.—The local unit of the Aragon-Baldwin Cotton Mills, Inc., has expended about \$20,000 on a building program which has enabled the company to greatly enlarge the beam storage department and the machine shop. Potter & Shackelford, Inc., of Greenville, S. C., had charge of the construction work on the new addition.

GRIFFIN, GA.—At a cost of more than \$100,000 the Lowell Bleachery, South, has work under way on the construction of a three-story mill addition measuring 102 by 110 feet. A new boiler house measuring 50 by 175 feet is also under construction. It will be one story. The \$100,000 expenditure will represent the new building program and the machinery set-up. The Lowell Bleachery, South, is engaged in bleaching piece goods.

DOTHAN, ALA.—Work has been inaugurated here on the construction of a modern plant to house the Dothan Silk Hose Company, a subsidiary of a nationally known industry. The new industry will have an outlay of approximately \$350,000. The site for the new industry building has been purchased for \$6,000 and the contract for construction of the initial mill building, which will cover 25,000 square feet, was recently awarded. This will represent an investment of \$70,000, and \$250,000 additionally will be expended for the machinery.

MT. HOLLY, N. C.—Progress is being made on the Mount Holly Knitting Mills plant here, which will be ready for occupancy by August 1st. The new mill will occupy the old Catawba Spinning Company building on East Central avenue.

Contractors are now pouring the concrete floor in the wing that will house the knitting machines. The floor has already been completed in the dyehouse, and carpenters are working on the main part of the building.



“Any Three” 1. Take any three
2. From any lot
3. Then you'll agree—

“Go TERMACO”

For CARD ROOM BOBBINS,
Creel, Twister and Warp Spools, Skewers,
Clearer Boards, Scavenger Rolls, etc.

The Terrell Machine Co., Inc.

Charlotte, North Carolina

WENTWORTH

Double Duty Travelers

Last Longer. Make Stronger
Yarn. Run Clear. Preserve the
SPINNING RING. The greatest
improvement entering the spinning
room since the advent of the HIGH
SPEED SPINDLE.

Manufactured only by the

National Ring Traveler Co.

Providence, R. I.

11 W. First Street, Charlotte, N. C.

Reg. U. S. P. O.



**Southern Electric Service
Company, Inc.**

ELECTRICAL EQUIPMENT

SOLD, REPAIRED AND INSTALLED

Greenville, Spartanburg, Charlotte, Greensboro,
S. C. S. C. N. C. N. C.

WANTED

Experienced Superintendent for small Braided Cord mill. Must know braiding, twisting, finishing and dyeing. Address "Superintendent," care Textile Bulletin.

WANTED—Position as Master Mechanic. Well experienced on steam and electric work in different plants. Can improve present methods. References. Address "M. M.," care Textile Bulletin.

Electrician Painfully Burned

Burlington, N. C.—R. W. Walker, Graham electrician, was reported painfully burned about his arms July 11th in testing lines at the Scott Hosiery Mill at Graham.

Removed to his home, he was given treatment by Dr. W. C. Goley. Although not rendered unconscious, the shock was said to have burned the skin from his arms and hands in places.

Workers Get Vacation;
Receive Full Time Pay

Clinton, S. C.—The several hundred employees of the Joanna Cotton Mills of Goldville received a week vacation recently with full pay. This policy is followed annually by the management in appreciation of the services of the people of the mill community.

Data Show Little Change In
Rayon Weaving Activity

Little change in rayon weaving activity for the week ended June 18 as compared with the previous week is shown in the survey of loom activity of the National Rayon Weavers Association.

The greatest change is the reduction in actual operations in pigment taffetas from 87 per cent to 75 per cent. In staples and linings division, on a loom-hour basis, operations were equivalent to 55 per cent of capacity as compared with 58 per cent for the week ended June 11.

The following is a comparison of operations for the week ended June 18 as compared with the week of peak operations in 1937:

	Reduction of Operation Per Cent	Actual Operation Per Cent
150 denier taffetas	62	68
100 denier taffetas	48	52
Faille taffetas	77	23
Twills and serges	54	46
Lining taffetas	—	117
Box loom fabrics	72	28
Pigment taffetas	25	75

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WANTED—Position as Master Mechanic. 12 years' experience. I. C. S. trained. Steam or Electric drive. Interview welcomed. Address "Mechanic," care Textile Bulletin.

POSITION WANTED—Supervisor of statistical units: Hollerith or Powers tabulating, payroll, accounting, general detail, etc. Age 36. Excellent references, thorough mill training. Last employer liquidated. With previous company 16 years. Will accept other suitable employment anywhere, immediately. Address "J. C.," Box 425, Lawrence, Mass.

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Former Member Examining Corps
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WANTED—Position by experienced overseer spinning, slasher room and weave room. White and colored goods. Address "W. S. P.," care Textile Bulletin.

PICKER PETE SEZ:

CUSTOM MADE
means a PERFECT
FIT. Our belting
is made to fit
YOUR needs.



Phone 2218 (Day) 3916 (Nite)

GREENVILLE BELTING COMPANY

Manufacturers of Leather Belting

Mill Strapping and Loop Pickers

Expects Great Benefits To Cotton From New Laboratory

Waco, Tex.—Some of the far-reaching benefits to cotton expected to be derived from the proposed cotton research laboratory, funds for which have been made available by Congress, were outlined by A. M. Goldstein, chairman of the laboratory section of the Statewide Cotton Committee, who is treasurer of the Goldstein-Migel Company.

"We believe our scientists will produce a fabric cheaper and better than rayon, made of cotton, treated chemically, that will use between 1 and 2 million bales of cotton per year," he said in a speech before the Waco Junior Chamber of Commerce. "We believe they will produce a fabric made of cotton, treated chemically, that will replace silk stockings, that will have a sheen like silk."

"What did we know 20 years ago about rayon? Neither did we know anything 20 years ago about Cellophane. There is no telling how many uses we will find for cotton if we can have a laboratory and employ the brains to discover these new uses."

He contended that for insulation and air-conditioning another two million bales of cotton.

Texas Cotton Crop Outlook Unfavorable

Lubbock, Tex.—Cotton growers in most of the area comprising the South Plains of Northeast Texas are facing a discouraging outlook for the current season. Instead of producing more than one million bales, as was done last year, the indications point to less than one-half that quantity for this season.

In the first place, the 1938 Government farm program has forced a

marked reduction of cotton acreage, compared with last year. This curtailment was greatly augmented by delayed rains which caused the planting to be unusually late. Then came a period of high winds which "blew out" thousands of acres of cotton in the more sandy areas. The replanted cotton was just out of the ground when excessive rains came which have destroyed much of it.

In Lubbock county, which led all the counties of Texas in cotton production last year, prospects are so unfavorable that the present season's crop will not be one-third of that of last year, it has been estimated.

Mills Lose Effort To Collect Refund On Processing Tax

Charleston, S. C.—Refunds in AAA cotton processing and floor stock taxes were denied by United States District Judge Frank K. Myers to 16 textile firms seeking a total of \$4,572,394.21.

The cases, which were an aftermath of litigation resulting from the invalidating AAA processing taxes in 1935, were dismissed with costs.

The mills concerned are Abbeville Cotton Mills, Grendel Mills, the Mathews Cotton Mills, Greenwood Cotton Mills, Ninety-Six Cotton Mills, Monarch Cotton Mills, Panola Cotton Mills, Ware Shoals Manufacturing company, Whitney Manufacturing company, Excelsior Mills, Victoria Cotton Mills, Hermitage Cotton Mills, Mayfair Cotton Mills, Oconee Textiles, Inc., and Anderson Cotton Mills.

Japs Buy Less Cotton in U. S.

Washington.—Japan dropped from first to fourth place among America's cotton customers during the last 11 months.

The census bureau reported Japan-

ese purchases of American lint were 621,000 bales from August 1937, to June 1938, compared with 1,522,000 bales for the corresponding period a year ago when it was this country's leading cotton customer.

England has replaced Japan, taking 1,521,000 bales of cotton during the last 11 months compared with 1,120,000 bales from August 1936 to June 1937.

Other countries which have purchased more American cotton than Japan during the last 11 months are France. 711,000 bales and Germany, 647,000 bales. France increased its purchases from 653,000 bales during the period while Germany's purchases rose from 627,000 bales.

Total exports of cotton to all countries was placed at 5,403,000 bales valued at \$296,443,000, from August 1937 to June 1938, compared with 5,316,000 bales valued at \$364,296,000 for the corresponding 1936-37 period.

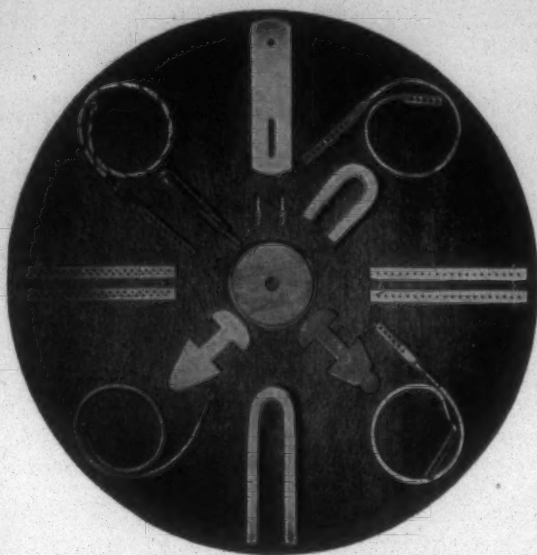
Three Cotton Suits Given Roosevelt

Washington.—Representative Fulmer (Democrat, South Carolina), following a practice of several years, delivered to President Roosevelt three cotton summer suits recently.

They were tailored to Mr. Roosevelt's order by a New Orleans firm. Fulmer said the President had worn similar suits given him in previous summers.

Fulmer, a member of the House agricultural committee, has championed wider use of cotton. He said he planned to leave Thursday for his home at Orangeburg, S. C.

Rice Dobby Chain Co.



Millbury, Massachusetts



DARY RING TRAVELERS

The Dary Ring Traveler is the result of 40 years' experience and an enormous amount of research and experiment in high speed traveler manufacture. Dary Ring Travelers are made from *speciallly drawn stock* by the finest of skilled craftsmen. They are *guaranteed in weight, temper and style*. Write for samples and prices today.

THE DARY RING TRAVELER CO.
TAUNTON, MASS.

B. G. DARY, Treas. and Mgr.
CHARLES L. ASHLEY, Box 720, Atlanta, Ga.
JOHN E. HUMPHRIES, Box 843, Greenville, S. C.

CARECO
ONE-PIECE
FURNACE LINING
Reg. U.S. TRADE MARK Pat. Off.
For
REPAIRING
or
LINING
A
PLASTIC
LINING
USED IN
PLACE OF
FIRE BRICK

LONGER LASTING BOILER FURNACES

"Boiler furnaces lined with CARECO last two to four times longer than those lined with fire brick. Write for quotation."

CAROLINA REFRACTORIES CO.
Hartsville, S. C.

Cotton Yarn Markets

Philadelphia, Pa.—With sales of cotton sales yarns in approximately the same volume as the preceding week, it is expressed as doubtful by some observers that the proposed increases by some mills will be successfully executed. They are of the opinion that the demand has not yet reached the point where present top asking prices are easily disposable. The latest drop in raw cotton prices is given as the chief reason.

On behalf of the yarn mills, it is pointed out by some observers that even with cotton quoted below the recent high, and with the spinners firm for the rates then being quoted, the spinners still are not so well off as they were last January, as far as their gross margin above cotton cost is concerned. As compared with a year ago, the average spinners' gross margin above cotton cost is nearly 30 per cent less. This condition is assumed to indicate that spinners this month and next will make every effort to resist customers' assaults on the yarn price structure, though the urge of spinners to book additional orders with the closer approach of fall will become stronger.

It is asserted by some sellers that customers in general are today better able to pay prices giving spinners a reasonable margin, because through their own exertions and those of the jobbing and retail trades, many manufacturers using sale yarns have been able to reconstitute their credit. This is confirmed by the fact that failures affecting yarns have been steadily diminishing.

A measure of enlarged demand for combed peeler yarn is given in the latest summary furnished by spinners, showing their production, shipments and sales, which confirms reports of some local distributors to the effect that about twice as much has been sold as was currently being produced, with initial activity being especially pronounced in the single combed yarns. The advance which has taken place in combed yarn quotations, also, is evidence of better demand, though some sources still appear to lag in marking up their prices.

Southern Single Skeins		Two-Ply Plush Grade	
8s	17½	12s	19½
10s	18	16s	21
12s	18½	20s	22
14s	19	30s	28
20s	20		
26s	23		
30s	25		
36s	28		
40s	29½		
Southern Single Warps		Duck Yarns, 3, 4 and 5-Ply	
10s	18	8s	18
12s	18½	10s	18½
14s	19	12s	19
16s	19½	14s	20½
20s	20	16s	21
26s	23	20s	21½
30s	25		
40s	29½		
Southern Two-Ply Chain Warps		Carpet Yarns	
8s	18½	Tinged, 5-lb., 8s, 3 and	
10s	19	4-ply	15½
12s	19½	Colored strips, 8s, 3 and	
16s	20½	4-ply	16
20s	21½	White carpets, 8s, 3 and	
24s	23½	4-ply	18
26s	24½		
30s	25½		
36s	29½		
40s	30½		
Southern Two-Ply Skeins		Part Waste Insulated Yarns	
8s	18	8s, 2-ply	14½
10s	18½	8s, 2 and 4-ply	15
12s	19	10s, 2, 3 and 4-ply	15½
14s	19½	12s, 2-ply	16
16s	20	14s, 2-ply	16½
20s	21½	16s, 2-ply	18½
26s	24½		
30s	25½		
40s	30½		
Southern Two-Ply Skeins		Southern Frame Cones	
8s	18	8s	17½
10s	18½	10s	18
12s	19	14s	18½
14s	19½	16s	19
16s	20	20s	20½
20s	21½	22s	21
26s	24½	24s	21½
30s	25½	26s	23
40s	30½	28s	24
		30s	25

Cotton Goods Markets

New York.—Sharp fluctuations in cotton prices brought trading in cotton gray cloths to a halt last week. Sales fell below production for the first week in more than a month.

But despite offerings from second hands, prices were well maintained on print cloths, sheetings, and related items.

Combed goods were slow but prices were strong. Most mills stepped up production during the week and a number resumed full time operations. Higher prices on drills and other industrial fabrics were named by mills.

Converters sold sizable amounts of percales, sheets and pillowcases, outing flannels, denims, coverts, and other types of colored cottons and marked up prices on a number of items.

Business in the primary finished goods markets lacked the briskness that featured it during the previous week. Most larger operators had already acquired a considerable part of their distributing and manufacturing requirements. To that extent, mills were once more running more fully than they had in well above a year. Smaller buyers were likewise in the market for goods, but not enough had as yet made an appearance to appreciably improve the market above the healthy level to which it had ascended. Many smaller buyers are due to make known their needs within the near future, for each week piles up a larger aggregate of contract covering. Various features in trade accentuate how markedly sounder the market is than heretofore. Even timid retailers have felt impelled to order more than they had any idea of doing a month ago. Various buyers have ordered within restricted delivery periods but, seeking to cover farther ahead, they have sometimes increased the quantities within a two- to three-months' period.

Print cloths, 27-in., 64x60s	3¾
Print cloths, 28-in., 64x60	3⅞
Gray goods, 38½-in., 64x60s	4¾
Gray goods, 39-in., 80x80s	6¾
Tickings, 8-ounce	15
Denims, 28-in.	11
Brown sheetings, standard	9⅞
Brown sheetings, 4-yard, 56x60s	5½
Brown sheetings, 3-yard	6¼
Staple gingham	10

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The Spinning Test As a Means of Determining Cotton Quality

(Continued from Page 11)

Rates of end breakage, appearance (that, is, uniformity, freedom from neps and particles of foreign matter), uniformity of diameter or "levelness" of yarns, resistance to abrasion, and winding efficiency are some of the other tests employed to determine yarn quality. Fabrics woven or knitted from such yarns may likewise be tested for tensile and bursting strength, resistance to abrasion and tearing, air and water permeability, dyeing and finishing properties, launderability, serviceability, and the like.

The Bureau's spinning laboratories possess a large file of carded and combed yarns from many different cottons. From these, together with samples of yarn obtained from a number of mills, a series of photographic standards for yarn appearance have been developed. Yarns made in the course of spinning tests are found on boards, compared with these standards, and graded accordingly.

All of the tests mentioned provide data which reflect, to some extent at least, the quality of the raw cotton employed.

Variables Encountered in Spinning Tests

At the beginning of this paper it was pointed out that the spinning test is not the cut-and-dried affair that it is popularly supposed to be. Now that a description has been given of the "why" and the "how" of the spinning test, it is necessary to consider the "ifs" and the "buts" involved.

If, in comparing two or more cottons in a spinning test, the investigator could be certain that he had the optimum combination for each, the matter would be simple. Unfortunately it is possible to employ widely different settings, speeds, and other factors, without producing visible changes in the quality of the product, so that the results of employing a particular combination may not be known until the end product is tested. The number of variables to be considered in a spinning test (spinning organization, speeds, settings, and the like) is very large, and it is clear that the possible combinations are practically infinite.

Let it be supposed that there are 100 points in the manufacturing process where a condition may be varied; as, for example, card licker-in speeds, drawing-frame

drafts, roving twists, spinning-frame roll settings, etc. Let it be further supposed that there are 10 different values for each variable. What combinations of variables should be used for a given cotton so that the resulting product is certain to be as nearly perfect as it can be made?

A little calculating of permutations and combinations shows that the number of possible combinations is 10 raised to the 100th power, or 1 followed by 100 zeros. But, although there are probably several million different routes that a man can take between his home and his office, without leaving the city, is it necessary for him to test out each and every one of the routes before determining which is the best for him to follow?

Solution of the Problem

Just as an individual soon settles upon a route which he considers best for his purposes, so, by breaking the problem of spinning variables into manageable segments and making a study of the effects of the more important ones encountered, mixing in a liberal amount of judgment during the process, it should be possible eventually to conduct a spinning test and say with a good deal of conviction where a particular cotton stands with respect to quality.

A number of years ago, this theory was judged by those concerned in the U. S. Department of Agriculture to be a sound one, and a start was made on the problem. In addition to the spinning tests of a more or less routine nature, there was established at the spinning laboratory a program of fundamental studies. One of the purposes of this work is to arrive at a better understanding of some of the more important variables and to apply this information in such a manner as to give a high degree of reliability to the results of spinning tests.

These fundamental studies have yielded information relating to machine speeds, settings, drafts, twists and other factors, both single and in various combinations. From this information it has been possible to establish many facts regarding the influence of these variables upon the quality of the product. In some cases it has been found that within the range of working conditions the differences are insignificant and may be ignored; in others, the variables must be considered carefully. Correction factors have been developed which can be applied to the test data to eliminate the influence of certain variables.

On the basis of some of the findings it has been pos-

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sible to establish equations between the values for certain fibre properties and the settings or other adjustments on the machines. It has been found that the optimum yarn twist, from the standpoint of strength, depends upon the length of staple, other factors being equal. An equation showing the relationship of optimum twist to the length of fibre at a particular point in the fibre length array has been developed and put into use.

Space prevents a description here of the findings which have resulted from these fundamental studies. It is sufficient to say that as a result of this work it has been possible to make substantial improvements in the technique of routine spinning tests, and that it is now possible to assign causes for and to evaluate many if not most of the differences in results which are due to manufacturing conditions rather than to differences in cotton quality.

Increasing use is being made of modern statistical methods in sampling, compiling, and analyzing spinning test data. Wherever feasible, special applications of correlation, variance analysis, and other tests of the significance of differences have been developed and put to frequent use.

With improved laboratory technique and modern methods of analysis, spinning tests can now be conducted with greater confidence and the results interpreted more intelligently than heretofore. Nothing can take the place of the spinning test, *properly conducted under adequate conditions*, to give a measure of the utility of a cotton, but even this method is as yet by no means perfect. Continued effort is being made to increase its reliability and to develop short-cut methods which will speed up the tests, increase the number of samples that can be handled and lessen the expense involved without sacrifice in precision of results.

Versatile Cotton

The campaign to develop new uses for cotton and reduce the surplus of Dixie's major crop is meeting with notable success. Experiments conducted in widely varying fields point to vast new markets for cotton products, meat-packing and aviation being the latest industries to emerge as potential consumers of cotton on a large scale.

Cotton muslin has been found to have distinct advantages as a sanitary and preservative wrapping for veal. A national meat-packing concern has had such marked success with cotton wrapping that it has adopted muslin covering exclusively for all of its veal meats. Veal now can be shipped thousands of miles without affecting its quality, it is claimed, the new wrapping method preserving the "bloom," or color, of the meat maintaining its freshness. In its experimental stages last year, the new method of wrapping consumed eight million yards of cotton muslin, and a consumption of at least twenty million yards of cloth is expected this year. Experts hail this development as one of the most important advances in the merchandising of fresh meat in fifty years.

Meanwhile, the Army Air Corps is experimenting with cotton cloth in the construction of airport runways. The idea developed from a similar use of cotton in road construction. The cloth is used primarily as a binder for bituminous paving material, being designed to augment elasticity and lengthen the life of the road. A test runway at Reilly Field, Ala., has not yet gone through a winter, so it is too soon for final evaluation of the idea, but results thus far have been satisfactory, it is reported. If the experiment proves successful, it may bring about a substantial and rapid development of the nation's airport facilities. An Air Corps spokesman explains that cotton construction would be less than half as expensive as concrete.—*Atlanta Journal*.

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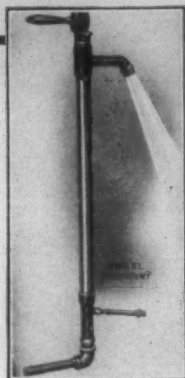
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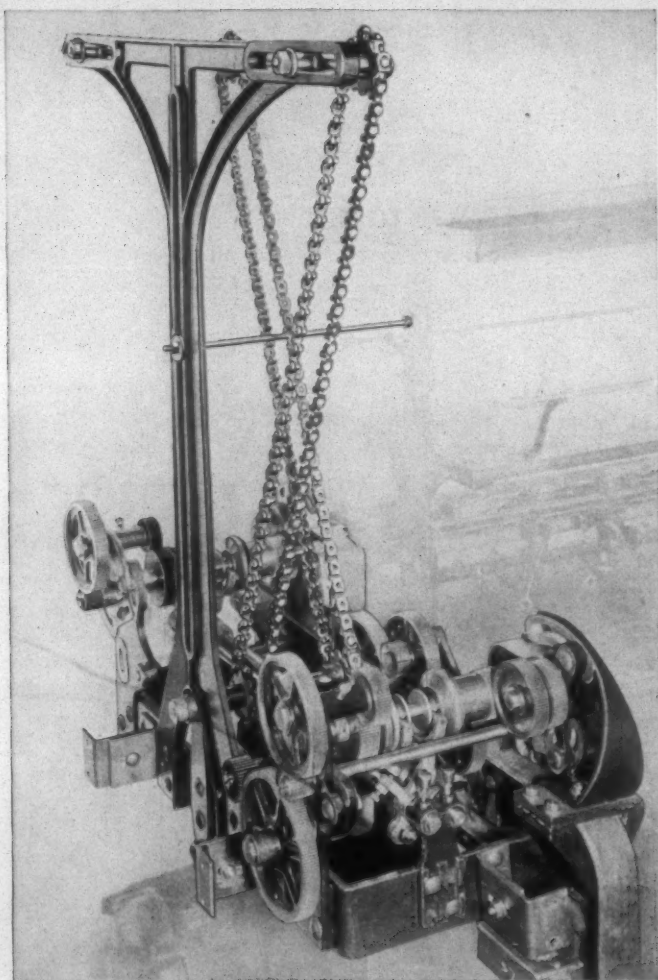
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